

- AB
- b) a conductive catalyst array support positioned adjacent to the support backing, said catalyst array support having multiple locations for supporting solids;
 - c) a catalyst mask positioned adjacent to the catalyst array support, said catalyst mask defining holes arranged in alignment with the multiple locations for supporting solids of the catalyst array support; and
 - d) a cell cover positioned adjacent to the catalyst array support, said cell cover defining an opening for monitoring of the solids.
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17. (Amended) A method for screening an array of solids for electrocatalytic activity comprising:

- AB
- a) depositing the solids of the array on a catalyst array support;
 - b) placing a catalyst mask over the catalyst array support, said mask defining holes arranged in the same pattern as the solids of the array;
 - c) contacting the array of solids on the catalyst array support masked by the catalyst mask with a reagent fluid and a fluid containing an ion concentration indicator;
 - d) applying a potential to the catalyst array support;
 - e) applying excitation radiation to said catalyst array support;
 - f) measuring emission radiation emitting through the holes of the catalyst mask; and
 - g) determining electrocatalytic activity of the solids in the array from the emission radiation measurements.
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25. (Amended) A bulk catalyst testing apparatus comprising:

- AS
- a) a bulk cell body containing a first and a second fluid inlet and a first and a second fluid outlet;
 - b) a fluid permeable bulk catalyst support structure having a catalyst thereon positioned adjacent to the bulk cell body and in alignment with the first fluid inlet and the first fluid outlet of the bulk cell body; and